

ABSTRACT

A fluid analyzer having a concentrator and separator for concentrating and separating fluid samples at pressures up to about 10,000 psi (~ 700 bar). The concentrator and separator  
5 may consist of a solid-state thin-film heater-adsorber and a channel supported by a solid substrate. The concentrator may have numerous heated interactive elements for adsorbing and desorbing constituents of a sample fluid. The interactive elements may be heated in a time phased sequential manner by  
10 heaters. The separator may separate the sample fluid by compound. There may be thermal conductivity detectors, a flow sensor and electrical conductivity detectors proximate to the channels. This system of concentrator, separator, heaters and sensor may provide information about the sample fluid  
15 composition. A pump may be connected to the channel to move the sample fluid through it.